

## ROOTS OF THE CALIFORNIA BOTANICAL SOCIETY\*

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### ABSTRACT

The historic roots of the California Botanical Society are traced from 1853, when the California Academy of Natural Sciences was founded, to the organizational meeting in 1913 called by W. L. Jepson. Twenty-five organizations and events more or less influenced the Society's origins. Natural history events, especially botanical, in the East, the role of the California Botanical Club, the Sierra Club, and rivalries are noted particularly.

“Some time there will be here in Berkeley a wild-flower protection society, just as in the older states . . . . Some time, gentle reader, the call will come down from the mountain top . . . and everywhere the expression of the overmastering desire—the love of life.” This from a short essay published by Jepson in 1898 entitled “The Love of Life”.<sup>1</sup>

The historian of the sciences must divest prejudices and special interests of his own age, so far as that is possible, and migrate into a strange land to bring back as unbiased an account as he can of what he has learned. He must not treat the past as one in spirit with the present. To paraphrase William Ferguson,<sup>2</sup> we must be alive to the existence of many different pasts, leading without predetermined succession, much less a progression. The historian pursues the facts and fastens upon them. “The dead were and are not. Their place knows them no more and is ours today. Yet they were once as real as we and we shall tomorrow be shadows like them.”<sup>3</sup> Perhaps we should remember Montesquieu: in the infancy of societies, the chief shapes the institution; later the society shapes the chief.

Were there differences between the Eastern and Californian devotees of botany? Botanists beach-combed Boston harbor for European ballast weeds and excitedly published their trophies in the *Bulletin* of the Torrey Club or *Rhodora*. Californians found stowaways from Chile or Mazatlan. Sometimes they asked “is it native?” or “are birds carrying the seeds?” Compared with the flora of the Eastern United States, California proved rich in endemics. Indian uses of plants had been studied, too. In the Mother Lode it was Digger Indians amid the Digger pines. Jepson called anthropologist Pliny Earle Goddard “my traveling companion on an expedition to

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the South Fork of the Salmon River in 1902", where Goddard was noting the food and ceremonial plants of the Hupa tribe.

#### ALBERT KELLOGG AND THE ACADEMY

Roots of the California Botanical Society (CBS) may be traced back to the pioneering spirit of Albert Kellogg, who with three other doctors, a real estate agent, and a school superintendent met to organize the California Academy of Natural Sciences (Fig. 1). From Kellogg's taste, botanical discoveries dominated the Academy's deliberations. During the first decade 123 papers were published of which 43 concerned trees and flowering plants.

When Dr. Kellogg arrived in Sacramento on 8 August 1849, he surely brought the argonaut spirit, borne in the sailing ship around the Horn, the year "the world rushed in". As a youth, he had enjoyed natural history in Connecticut and brought that sharing of enthusiasms with amateurs so important in scientific societies. Jepson relates the welcome reception Kellogg gave him as a young man<sup>4</sup> on his first visit to the old Academy. The first of the many endemic species Kellogg described was the Channel Island mallow, *Lavatera assurgentiflora*. With a certain patriotism, he described the noble Washington Lily and with almost missionary zeal, the oracle oak, *Quercus morehus*. Occasionally, novelties slipped away from the Bay Region botanists to be first published by the Eastern Establishment and foreigners. Kellogg became almost militant and endeavored to publish "new species" more promptly through the Academy's *Bulletin*. He had seen John Lindley herald the Sierra sequoia in London before American scientific circles awoke.<sup>5</sup> Kellogg, who lived 38 years in "the bosom of the urgent West", was *the* pioneer spirit.

#### TRANSCONTINENTAL AND STATE SURVEYS

Three enterprises brought California to the attention of botanists in the East and beyond. Locally, the California Geological Survey, commonly referred to as the "State Survey", staked out the limits of knowledge for the three kingdoms. The *Botany of California* in two volumes was especially important for the field work of William Henry Brewer, with his attention to detail and careful numbering of collections, and for his journal that documents his travels. From the surviving copies with their marginal notes and queries, it is evident how that important reference-work served California botanists.<sup>6</sup> If you have not read Brewer's account, edited by Francis Farquhar under the title *Up and Down California*, you have a rewarding experience ahead.<sup>7</sup> On one occasion John Muir wrote, "blessed Brewer of a thousand speeches and stories and merry ha-has."

Secondly, the Pacific Railroad Surveys carried out by the U.S. Army Corps of Engineers seeking a practicable route from the Mis-

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|  International<br>Phytogeographic<br>Excursion<br>Sept 1913 |  California<br>Botanical<br>Society<br>12 Apr 1913 | Pacific Division<br>of A. A. A. S.<br>12 Apr 1913 |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|

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**1910**

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Sierra Club<br>28 May 1892 |  New England<br>Botanical Club<br>1895 | Harriman<br>Alaska<br>Expedition<br>1899 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------|

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|-------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|  New York<br>Botanical<br>Garden<br>1891 | Stanford<br>University<br>1891 |  California<br>Botanical Club<br>7 Mar 1891 |  University<br>of California<br>Botanic Garden<br>1891 |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|



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**1890**

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|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------|------------------------------------------------|
| San Diego<br>Society of<br>Natural History<br>1874                                                             | <i>Naturalists'</i><br><i>Directory</i><br>1877 | New Orleans<br>Cotton Centennial<br>1884                | Bureau of<br>Biological<br>Survey<br>1885-1940 |
|  Arnold<br>Arboretum<br>1872 | California<br>College of<br>Pharmacy<br>1872    | San Francisco<br>Microscopical<br>Society<br>1872, 1893 |                                                |

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**1870**

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| University<br>of California<br>1868                                                                                              | <i>American<br/>Naturalist</i><br>1867 | <i>Overland<br/>Monthly</i><br>1868-1876             |  Torrey<br>Botanical<br>Club<br>1867 |
|  Harvard University<br>Gray Herbarium<br>1864 | Pacific<br>RR Surveys<br>1853-1859     | California<br>Academy of<br>Natural Sciences<br>1853 | California<br>Geological<br>Survey<br>1853-1864                                                                         |

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**1850**

FIG. 1. Roots of the California Botanical Society. Events, institutions, and organizations with botanical connections to the Society are identified by the leaf symbol. Publications are printed in italic. Dates represent the day or year in which an event occurred or was initiated or when an institution, organization, or journal was founded.

issippi River to the Pacific<sup>8</sup> was another enterprise in the growth of California botanical knowledge, but the naturalists who accompanied the surveyors in their buckboard wagons and on horseback delivered collections to John Torrey in New York and Asa Gray at Harvard.

The essential reference herbarium delivered by Asa Gray to Harvard in 1864<sup>9</sup> was the third event. The "Gray Herbarium" and the comprehensive library was to stand beside the Hooker Herbarium at Kew in calling for necessary visits by California students through the years.

#### TORREY BOTANICAL CLUB

Three years later (1867) and twelve years after the founding of the California Academy of Sciences, John Torrey, beloved by the botanical community, became the center piece for the Club that, against his wish, was to bear his name.<sup>10</sup> There were 31 founding members. William Henry Leggett, a mainstay of its early years, began distributing a four-page monthly sheet in 1870 as a privately funded venture to which he gave the name "Bulletin of the Torrey Botanical Club". He admitted the Club was "rather informal and somewhat fluctuating". Prominent in the Club was George Thurber, editor and publisher of horticultural titles, who was instrumental in incorporating the Club. Today the Club of Leggett and Thurber flourishes as the oldest exclusively botanical society in America. Thurber's herbarium came to the Academy in 1893, only to be lost in the holocaust of 1906. John Strong Newberry, who had collected in California with the Pacific Railroad Survey, was president of the Club for ten years. Newberry's interest was fossil plants and he taught paleontology at Columbia College from 1866 to 1890.

#### *American Naturalist* AND *Overland Monthly*

How does the *American Naturalist* published in Salem, Massachusetts, feed the roots of a California society? Following the trans-continental railroads and the opening of the West, the signing of the Morrill Act in 1862, and the building of land-grant colleges, there followed a growing interest about the living things of this wilderness and wide-open spaces. Varied, informative, entertaining essays on the prairie dogs, pronghorns, burrowing owls, and locoweeds—life forms never seen in the East—appeared in the nineteen volumes of the *American Naturalist* of the late 19th century. Classes in academies and female seminaries were reading George Perkins Marsh's *Man and Nature*. To learn more about the West there was the *American Naturalist* with first-hand descriptions by Elliott Coues, Edward Palmer, William Henry Brewer, James Graham Cooper, and others. Cooper, for example, who had been an army surgeon with the Pacific



Railroad Surveys, wrote the ornithology volume for the California State Geological Survey—Brewer had collaborated with Asa Gray and Sereno Watson in the botany volume—after which Cooper moved to California.

The *American Naturalist* was founded in 1867 by four pupils of Louis Agassiz led by Frederic Ward Putnam (1839–1915), who in turn would be the teacher of David Starr Jordan. Putnam published on the fishes of Salem Harbor at 16 and became a most important ichthyologist of the 19th century. Described as “a wiry, nervous, black-haired, black-eyed, intense little fellow,” Putnam guided museums in Salem, Boston, and Cambridge, and for 25 years led the American Association for the Advancement of Sciences.<sup>11</sup> E. G. Conklin related in his “Early history of the *American Naturalist*” that, from its first printing of 250 copies, “Putnam was indefatigable in his work for the *Naturalist*.” Later in our story we shall see how Putnam also attended the birth of the *Naturalist's Directory*.

About this time, San Francisco's *Overland Monthly*, the “true pulse of a pioneer society”, as Franklin Walker<sup>12</sup> characterized it, was on sale in cities and towns. The cover of the first issue carried a grizzly bear, his feet planted on the iron rails, a snarling muzzle turned towards the oncoming westbound locomotive. He represented the independent spirit of the West. Anton Roman, its manager, had arrived in the gold mines in 1850, peddled books to the miners, then opened a bookstore in San Francisco in 1859. He published the *Overland Monthly* for eight years. Besides short stories—some gained lasting fame: for example, Bret Harte's *Luck of Roaring Camp* appearing in installments—scientific articles were featured. Andrew Jackson Grayson told about his Mexican jornadas; Josiah Whitney and Clarence King wrote their rockbound opinions; C. C. Parry,<sup>13</sup> and separately, J. G. Lemmon, on their botanical excursions. In 1870 Anton Roman published Nicholas Bolander's *Catalogue of plants growing in the vicinity of San Francisco*.

#### BEHR, DAVIDSON, AND HARKNESS

A newcomer escaped from the German Revolution of 1848, and arrived in San Francisco in 1850 when wild columbines (*Aquilegia truncata*) grew on Telegraph Hill.<sup>14</sup> Dr. Hans Herman Behr joined the Academy in 1854 and served as its vice president from 1864 to 1904. When the California College of Pharmacy opened in 1872 he began teaching botany and in 1884 published a *Synopsis of the Genera of Vascular Plants in the Vicinity of San Francisco, with an Attempt to arrange them according to evolutionary principles*,<sup>15</sup> for his botany students. In 1896, he published his “Botanical reminiscences of San Francisco” in Jepson's *Erythea*. Hearty, generous, witty, Dr. Behr was popular in the Bohemian club, an association that Prof. Setchell later enjoyed.

Dr. Behr found a friend in George Davidson. Born in 1825 in Nottingham, England, Davidson spent his boyhood in Philadelphia. He entered the U.S. Coast Survey in 1845, preparing charts that guided the Gold Rush vessels that were soon to converge on the coast. He prepared successive editions of the *Coast Pilot*, known to the mariners as "Davidson's Bible". For sixty years he was the best known scientist on the Pacific Coast—a member of over forty scientific and learned societies. Fame is fickle. Davidson is not mentioned in the *Dictionary of Scientific Biography*. His 6.4 inch telescope in Lafayette Park, San Francisco, was the first observatory in the state, and he was pivotal in the history of the observatory funded by James Lick. His library was so rich that Robert Louis Stevenson was advised to check, on his visit to San Francisco, whether his wanted books on the South Pacific were in Davidson's library. They were. We do not think of this astronomer and geographer as a botanist, but both Asa Gray and Professor Greene commemorated Davidson for his plant collections.

Davidson was president of the California Academy of Sciences from 1871 to 1887. If you peruse the records of the Academy in that decade you will note two alliances: The Harkness-Brandegees vs. the Davidson-Behr alliance. Harvey Willson Harkness was born in 1821 in Pelham, Massachusetts, took his medical degree in 1847, and then fled to California where he practiced first at Bidwell's Bar.<sup>16</sup> After his retirement in 1869, he devoted his years to fungi. Both M. C. Cooke and P. A. Saccardo named genera for Harkness, who described 108 new and old species of hypogeous fungi. He visited Sonoma County for truffles during the years Mrs. Curran (later Mrs. Katherine Brandegees) was botanizing there. David Starr Jordan characterized Harkness as "a physician of prominence", that he and Davidson "were vigorous and rather intolerant, a combination of qualities which was not rare in pioneer days."<sup>17</sup> Davidson and Harkness were born of different temperaments and their discord was fueled by an Academy problem. Davidson's comrade, James Lick, had endowed the Academy handsomely and the funds were invested in a large office building on Market Street, where the Academy's museum occupied cramped quarters in the rear. Harkness, evidently joined by the Brandegees, wished to devote the entire building to the museum. Davidson proposed that an income property be developed and the Academy move to another site. He had been president of the Academy since 1871, but was defeated in 1887 by Dr. Harkness in a vote of 80 to 102. Tensions flared and by 1891 the supportive Brandegees commented that Dr. Harkness has been "sacrificing to the Academy's interest and advancement all his time, attention and energy." Soon after Harkness' victory, an argument arose with Dr. Behr at one of the Academy directors' meetings. Unable to stand the force of Behr's points, Harkness shouted, "Oh,

go to hell!" Behr answered politely, "After you, my dear sir." David Starr Jordan succeeded Harkness as president, but the rancor persisted. Within a decade, the three combatants had left the stage: first, Harkness in 1901, Behr in 1904, and finally, Davidson died in 1911 one year after he received an honorary LL.D. from the University of California.

#### CASSINO, ORCUTT, LEMMON, AND MERRIAM

Whereas the *American Naturalist* stimulated field biologists by its articles of discovery, the *Naturalist's Directory* matched collectors who might live on the opposite edges of the continent. For example, fern enthusiast John Gill Lemmon living in Sierra Valley might locate a fellow collector at the foot of the Adirondacks through the columns of the *Directory*. Although we associate the *Naturalist's Directory* with Samuel Edson Cassino, who first published it in book-form in 1877, it was Frederic W. Putnam, one of the founders of the *American Naturalist*, who initiated the idea of a directory. Putnam first listed 402 persons by "department of study" (Geology, etc.) and invited those and others to cooperate in a "Naturalist's Directory", as a feature of the *Proceedings of the Essex Institute* in 1865. Putnam managed and supported the "Directory" as part of his Salem Press, which published *American Naturalist*, until he disposed of the Directory to Cassino (1856–1937), then 22 years old. As a lad, Cassino had collected moths in company with entomologist A. S. Packard, author of a book on insects (also published by the Salem Press). *Cassino's Naturalist's Directory* as it came to be known appeared as his enterprise at intervals through the 30th edition (1936); under various managements it has continued to the present 44th edition (1985).<sup>18</sup> The San Franciscans Kellogg, Behr, and Bolander appeared in the first Cassino *Naturalist's Directory* of 1877. Other Californians included Mrs. Ellwood Cooper of Santa Barbara and J. G. Cooper of Haywood, Alameda Co. By 1880, the "California" section of the *Directory* listed 140 names.

Daniel Cleveland came to San Diego in May 1869 at the age of 31 to carry on his law practice. In 1874, he was one of the founders of the San Diego Society of Natural History and soon was corresponding with Asa Gray, who named a delightfully fragrant sage, *Audibertia clevelandi*, which was collected in the mountains near Potrero east of San Diego. Parry visited Cleveland in 1882. Probably Parry and C. G. Pringle encouraged another San Diego naturalist, Charles Russell Orcutt, who was only 21, to launch a modest "popular monthly", the *West American Scientist*, in 1884. By 1890, his *Scientist* was identified on the cover as the "official organ" of the Society, selling for 10 cents per number or one dollar for the year. Its influence was wide indeed; contributors included Parry, Edward

Palmer, and T. D. A. Cockerell.<sup>19</sup> San Diego, after San Francisco, continued as a Pacific Coast center of natural history into the 20th century, although Orcutt's *West American Scientist* remains a bibliographic relic.

The "good Doctor Parry" made influential friends. Among them were Leland Stanford and Charles Crocker, railroad builders who provided a pass for Parry and other botanists in the West. Parry likely spoke for John Gill Lemmon, who with his wife was thereby enabled to exhibit at the World's Industrial and Cotton Centennial Exposition that opened in New Orleans on 16 December 1884. The Southern Pacific Railroad had completed its route eastward from California to New Orleans in 1883. The booth at that Exposition may well have looked like a photograph labelled in Lemmon's hand "Lemmon Herbarium and its occupants", dated 23 June 1895<sup>20</sup> (Fig. 2). In this photograph, decorated with the *Darlingtonia* standing at the lower right, the portfolio on the floor, and behind the seated "occupants", is their precious curtained herbarium, the sheets resting as bolts of fabric in a department store. At the lower left we speculate that the *Botany of California* (in two volumes) or the *Pacific Railroad Reports* occupy the lowest shelf. Certainly Sara Allen Plummer Lemmon "energized his life", and was his helpmate in all his enterprises.<sup>21</sup> Jepson knew and understood the Lemmons and in his characteristic esoteric way, fittingly labelled a *Lomatium* described from their collection the "Love Parsnip". The *Naturalist's Directory* of 1905 reads "Lemmon, Mrs. J. G., Artist and Explorer, Lemmon Herbarium, 5985 Telegraph Ave., Oakland, Calif. Bot., Cryptogams, Eth[nology]", concluding with an asterisk indicating that Cassino had heard from the person since the last *Directory* edition. The next entry, "Lemmon, Prof. John Gill . . ." concludes "Bot., Mic[roscopy], Forestry, Zool. C[ollection]" and the asterisk as above. Sara survived John and attended the natal meeting of the Society called by Jepson in 1913, but her name does not appear in the list of members; she died in 1923 at the age of 87.

Although Clinton Hart Merriam did not join the CBS, his "Life Zones" and the concepts it engendered continue to provoke discussions in the laboratory and around the campfire. Merriam knew the Adirondacks and then collected in the Yellowstone with the Hayden Survey when he was 16.<sup>22</sup> His Bureau of Biological Survey, funded under various names, figured prominently in the West from 1885 to 1940. He organized the Death Valley Expedition of 1891 and its botanist, F. V. Coville, then 24, named the endemic poppy *Arctomecon merriami*. Merriam's Life Zones with "Lower Sonoran", "Upper Sonoran", etc., up to "Arctic-Alpine", were parts of the language that Merriam's boys adopted in the *North American Faunas*. Forty years after Merriam first proposed them, Jepson introduced his *Manual* with a review of "Life Zones". Merriam began





FIG. 2. The Lemmon Herbarium and its occupants (J. G. and S. P. Lemmon), Oakland, CA (23 Jun 1895).

mapping the Indian tribes of California and their uses of plants in 1904. He organized the Harriman Alaska Expedition, advised on its scientists, and finally edited its massive reports. He worked with his friend John Muir in conservation missions.

#### KATHERINE BRANDEGEE'S BOTANICAL CLUB

Competition is a growth-promoting substance for societies, as for American business. It is no misconception that the California Botanical Society had been delivered by Katherine Brandegee, M.D., assisted by Dr. Harkness in the "herbarium room" of the California Academy of Sciences on 7 March 1891. For the physicians' report read the journal *Zoe*,<sup>23</sup> itself brought into the world by the Brandegees in the 1890's. The Club had enrolled 99 charter members in the first month, including such names as Parish, Palmer, Cleveland,<sup>24</sup> Hasse, Sonne, Shockley, Carl Purdy, and John McLaren, Mrs. Ellwood Cooper of Santa Barbara,<sup>25</sup> and Mary Elizabeth Parsons—difficult to name a California enthusiast not in the Club. Prof. Dudley was president of the Club in 1893 and Parish of San Bernardino, vice president. Strong sentiments against Harkness and, by association, against Katherine Brandegee, are seen in Jepson's writings. In his admiring sketch of Edward Lee Greene published in 1918—Kate was still alive—Jepson related his first visit to the Academy when "an unkempt woman" with an "unpleasant voice" introduced Dr. Kellogg and Mr. Greene, whom she then labelled "a very wonderful man". Someday a biography of Willis Linn Jepson (Fig. 3)





FIG. 3. Willis Linn Jepson. Portrait by Peter Van Valkenburgh (Feb. 1927). "Telescope Peak; Panamint Range (11,000 ft.), looking toward Sierra Nevada."

will be written. A chapter may well be titled "Bold Kate, Jepson's 'Viper Parsnip'".<sup>26</sup>

#### SENATOR STANFORD'S DR. STILLMAN AND PROFESSOR DUDLEY

Just as during the 1850's, the 1890's were bustling meristemetic years for botany in the Bay Region. Growing points included Stan-

ford University, energized by President David Starr Jordan who brought William Russel Dudley to teach botany. Do not forget that Senator Stanford's private physician, Jacob Davis Babcock Stillman, had collected plants for John Torrey and that Stanford, on behalf of the Southern Pacific, befriended Parry with railroad passes for his botanizing junkets. Stanford had supported botany in small but important ways before Dudley came from Cornell. The Timothy Hopkins Seaside Laboratory, a "perfect paradise for the marine biologist" opened at Pacific Grove. Professor O. P. Jenkins<sup>27</sup> of Stanford was the director. Professor Setchell later found it a good collecting site for algae.

#### BRITTON-ABRAMS ALLIANCE

Far from California, but influencing its botanical future, was the founding of the New York Botanical Garden in 1891. The impact of its director and guiding spirit, Nathaniel Lord Britton, was to grant wide acceptance to the so-called American Code of Nomenclature that sought to enforce among botanists strict priority for the adoption of plant names. Professor LeRoy Abrams of Stanford, who succeeded Dudley, adopted the Brittonian code for his writings on the flora of the Pacific Coast. As David Keck has mentioned,<sup>28</sup> Jepson followed Harvard in adopting the policy of Kew in accepting plant names established by wide use among authors. Jepson viewed Abrams with his important *Illustrated Flora of the Pacific States* as a competitor and, in a way, this impelled Jepson to establish a California Botanical Society to advance his position of leadership in the botany of the state. Again, competition played its part here, as with Asa Gray versus Alphonso Wood in his bid for the market in introductory botany books for the East.

#### JOHN MUIR'S MEETING WITH JEPSON

John Muir's interest in learning plant affinities beyond the folk names was not acquired first in California—he had been botanizing in the savannahs of the South—but was fostered when he took the Sierras to heart. It was the Yosemite and the exploration of the great Tuolumne Canyon that he wrote about as early as 1871 in, to be sure, the *Overland Monthly!* Muir's journals demonstrate that he was acquainted with the botany of the *Pacific RR Reports*. In 1871, he wrote, "I made my camp in a grove of Williamson spruce"—that was an early name for the Mountain hemlock. There are dozens of such botanical identifications. Remember that Albert Kellogg, Galen Clark, and artist Billy Sims were with Muir as they camped on the way to Mount Whitney. He collected the alpine cinquefoil, named by Asa Gray *Ivesia muiri*, on Mount Hoffmann. In 1877, Muir was with Gray and Joseph Dalton Hooker on Mount Shasta. He was a

guest at the Bidwell home, Rancho Chico, when the majestic Hooker Oak that C. C. Parry wrote about in the *Overland Monthly*<sup>29</sup> was spreading its canopy. In 1888, Muir camped with Parry for more than a week on the shores of Lake Tahoe. Afterwards, Muir would recall, "I had him all to myself—precious memories."

One of the roots of this Society was Jepson's meeting with John Muir in the founding of the Sierra Club. When and where Jepson first met Muir, I cannot say, but on 28 May 1892, they joined Joachim Henry Senger, a professor of German, William Dallam Armes,<sup>30</sup> who taught American literature at Berkeley, and William E. Colby,<sup>31</sup> who was later prominent in the Sierra Club, at the office of attorney Warren Olney in San Francisco, to draft the articles of incorporation of the Sierra Club. Professor Armes, a bachelor, had been teaching at Berkeley since 1882 and was living in the Faculty Club. Later, Armes edited Joseph LeConte's *Autobiography* (1903) and published a critique of More's *Utopia* (1912). Clearly, the two Berkeley professors were congenial friends of Jepson.

#### HARRIMAN ALASKA EXPEDITION, FARLOW AND SETCHELL

Alaska took the front stage in 1899 with businessman Edward H. Harriman in the lead role and a supporting cast of 25 scientists. The Harriman Alaska Expedition was a success that produced multi-volumed reports edited by Merriam. The only University of California faculty man to accompany the Expedition was William Ritter, although Jepson and Setchell met the Harriman party that summer.

William Albert Setchell had arrived in Berkeley to succeed Professor E. L. Greene in 1895. That year, the New England Botanical Club had been founded by Setchell's mentor, W. G. Farlow, and six associates and in four years the Club numbered 46 gentlemen "of leisure but not of idleness".<sup>32</sup> Farlow had been an assistant to Asa Gray in 1871 and later left his stroma of *mycologia* and an endowment to Harvard for cryptogamic botany, with the stipulation that "no part thereof shall be used to pay for lectures or instruction of any kind."<sup>33</sup> Setchell has related how a small separate expedition to Alaska had been planned in 1898, evidently while the Harriman Expedition was being planned.<sup>34</sup> Four of the members of the University of California had made reasonably definite arrangements to attempt some limited botanical exploration in the same general field, and especially had set their eyes on the region of the Island of Unalaska, at the southeastern corner of the Bering Sea. Besides Setchell and Jepson, then Assistant Professor of Botany, Anstruther Abercrombie Lawson, who had graduated in botany in 1897, and Loren Edward Hunt, Instructor in Civil Engineering, participated in the expedition. Jepson recorded in his Field Book that Hunt was "going along as supercargo and handy member of the party." Jepson

noted that the Harriman Expedition arrived at Unalaska 12–13 July 1899 and on that occasion he met several members of the Expedition including Merriam, Coville, Muir, and John Burroughs. Anstruther Lawson later became Professor of Botany at University of Sydney, and studied plant embryogeny, *Psilotum*, and gymnosperms. He was at Stanford from 1900 to 1906 where he wrote the “Life history of Sequoia”. Anstruther Lawson was brother of the witty combative geologist of Berkeley, Andrew Cowper Lawson.

#### JEPSON’S CALIFORNIA BOTANICAL SOCIETY

Jepson confided in his 1938 anniversary address to the CBS that the “idea of a Society was definitely conceived in the year 1902”.<sup>35</sup> It is easy to see how the stimulating meetings with outside scientists and the comraderie that then had existed with Setchell would have given rise to the merit of such a Society, but then Jepson added, “some one may note the lapse between that date and the year 1913 when the Society was founded.” He then suggested that a certain disassociation of the Stanford and Berkeley botanists may have been responsible for the delay. I suggest a certain competitive spirit that existed between the botanists of Stanford and Berkeley, and differences, for example, in the adoption of opposing codes of nomenclature as practiced by Abrams and Jepson, may have dissociated them. Then, too, the conspicuous vigor of the California Botanical Club and its associates in San Francisco, all contributed to Jepson’s compelling interest in founding the CBS directed from Berkeley.

Two Berkeley faculty members were prominently attending the birth of the Society. William Frederic Badé was temporary chairman of that founding meeting of the Society on 12 April 1913, and then was elected second vice president. Badé, an archeologist, linguist, and literary executor of John Muir had edited Muir’s letters.<sup>36</sup> He was a distinguished figure. Curiously, Jepson did not mention Badé in his Annual Dinner address of 1938, although he had died only two years before. By contrast and in lengthy prose, Jepson praised Cornelius Beach Bradley, professor of rhetoric at Berkeley who had missed being a full-time botanist, in Jepson’s words, “by only a narrow margin.”

Then on the same April day in 1913 on which the Society was being born at the Oakland Public Museum, another meeting was under way on the Berkeley campus. In preparation for the coming Pan Pacific International Exposition of 1915, the original AAAS founded and based in the East determined that it should be represented by a *Pacific Division*. Botanist Daniel Trembly MacDougal prompted that action. A committee of twenty scientists met to inaugurate a Pacific Division with W. W. Campbell in the chair.<sup>37</sup> Some of the other Berkeley faculty present were E. W. Hilgard, C.



A. Kofoid, A. L. Kroeber, A. C. Lawson, Ritter and Setchell. Professor Setchell was enrolled a charter member of the CBS, although he evidently was not present at the Oakland meeting.

#### INTERNATIONAL PHYTOGEOGRAPHICAL EXCURSION

The International Phytogeographical Excursion (IPE) of 1913, when European and Eastern botanists visited California after field trips in the Rocky Mountains and Crater Lake, was another root nourishing the growth of botany in the Bay Region.<sup>38</sup> Although the IPE took place five months after the founding of the Society, preparations had been going forward before the April meeting in Oakland. Botanists from Amsterdam, Copenhagen, Berlin, Munich, Zurich, and Cambridge, England, met their colleagues from Berkeley, San Francisco, and Stanford, later to be joined by MacDougal from Tucson and Samuel Bonsall Parish from San Bernardino. A new language of flowers was heard when the excursionists discovered that "Sail-ix" grows in America, "Sall-ix" in Europe. Whatever animus may have separated faculties was lost for the days the excursionists tramped California's chaparral and shared their experiences. The IPE was a high point for Jepson. He related some details in the first issue of *Madroño*, which appeared three years after the founding of the Society.

On Friday 12 September 1913, Professor Jepson presided at the dinner for the IPE. His closing words were:

"Now there arises a school of botanists, the plant ecologists, who are leading us back to the fields and woods, taking with them the experience of all other schools, and in addition making important use of the observations of the old-time naturalists. California is a glorious field for such work, and we welcome them here to help us appreciate our own flora, and to help Californians to an appreciation of it."

Montesquieu was right: Jepson shaped the Society but the Society in turn shaped Jepson's dream. On one of my 5 × 8 half-sheets for 15 March 1937, I wrote, "I learn tonight of a boyhood dream or aircastle, which Dr. Jepson himself now says was 'preposterous.'<sup>39</sup> In Vaca Valley, his boyhood home, stood a two-story brick building occupied by a small college dating from the Gold Rush days with something of a classic demeanor, a courtly flavor. This stood on a low hill with creek bed beside it deeply filled with rich alluvium. As a lad he envisioned devoting the structure to an herbarium and of surrounding it with a botanic garden. As a boy he did not have money to think of such a reality but he had the 'desire'."

#### ACKNOWLEDGMENTS

My thanks for assistance from Dr. Lawrence Heckard, Jepson Herbarium; Barbara Lekisch, Librarian, Sierra Club; from Wayne R. Ferren, Jr., Editor, *Madroño*; two



Tulanians: Milton G. Scheuermann, Professor of Architecture, and Dolores Gunning, Department Secretary. First and last, my wife Nesta.

## NOTES

A complementary essay to this subject is by J. Ewan (San Francisco as a mecca for 19th century naturalists with a roster of biographical references to visitors and residents, *In Century of progress in the natural sciences, 1853–1953*. pp. 1–63. California Academy of Sciences, San Francisco, 1955), hereinafter cited as *Century*.

1. Carlin, Eva V., ed. 1898. A Berkeley year. A sheaf of nature essays. pp. 61–64. Women's Auxiliary of the First Unitarian Church, Berkeley.
2. William S. Ferguson, *Greek Imperialism*, 1913, quoted in: Charles P. Curtis, Jr. and Ferris Greenslet. 1962. *Practical Cogitator*. ed. 3. New York. p. 134.
3. G. M. Trevelyan, *ibid.* p. 131.
4. Carew, Harold D. 1928. High priest of Flora. A glance at the life and works of Willis Linn Jepson, California's foremost botanist. *Touring Topics* 20(12):32–34, 50. p. 31.
5. Ewan, J. 1973. William Lobb, plant hunter for Veitch and messenger of the Big Tree. *Univ. Calif. Publ. Bot.* 67:1–36. p. 7. For the "smouldering resentment" of California botanists see: A. H. Dupree. 1959. *Asa Gray*. Harvard Univ. Press. pp. 395–396.
6. See W. L. Jepson (*Flora Calif.* 2:6. 1936). Volume 1 of *Botany California* (1876) was reprinted with additions in 1880, the year vol. 2 was published in a smaller printing because of reduced funding.
7. Yale Univ. Press. 1930. Jepson assisted Farquhar with plant identifications. For a charming vignette of Brewer, "omnivorous devourer of facts in every field", with a "tentacular mind", see: Rudolph Schevill (*Recollections of a golden age*. Pittsburgh, pp. 174–175, 1985). Ian Jackson provided this trail sign.
8. For a consummate analysis see: Max Meisel. 1929. *Bibliography of American Natural History*. New York. 3:189–220; and for critical commentary: I. M. Johnston. 1943. *J. Arnold Arbor.* 24:237–242.
9. Dupree, A. Hunter. *op. cit.* pp. 327–328. John Torrey was present at the Harvard occasion. The herbarium contained "at least 200,000 specimens", valued especially for the types.
10. Barnhart, John H. 1918. Historical sketch of the Torrey Botanical Club. *Mem. Torrey Bot. Club* 17:12–21.
11. Conklin, E. G. 1944. Early history of the American Naturalist. *Amer. Naturalist* 78:29–37; Ralph W. Dexter. 1982. F. W. Putnam as secretary of the A.A.A.S. (1873–1898). *Essex Inst. Historical Collections* 118:106–118, especially 109.
12. Walker, Franklin. 1939. San Francisco's literary frontier. Knopf, New York. pp. 256–283, especially 279–280.
13. See: J. Ewan. 1950. *Rocky Mountain Naturalists*. Univ. Denver Press. pp. 34–44. Portrait and suppl. refs. *In* J. and N. Ewan. 1981. *Biographical dictionary of Rocky Mountain naturalists*. Utrecht. pp. 168–169.
14. *Zoë* 2:3. 1891.
15. *Century*, pp. 12 and 43. A long overdue biography of Behr, a "Forty-eighter" and friend of Alice Eastwood, would profile a half century of California history.
16. T. S. Brandegee's biography of Harkness (*Zoë* 2:1–2 and portrait, 1891) was clearly an apology that appeared ten years before the death of Harkness.
17. *Century*, p. 37.
18. 44th edition of the *Naturalist's Directory* (*Flora and Fauna* Publs., Gainesville, FL, 1985) includes a portrait of S. E. Cassino (p. vi) and the first history of this important chapter in American natural history by Ralph W. Dexter (pp. 1–7) and additional notes by Ross and Mary Arnett. References kindly supplied by Dale Johnson (MO).
19. For references on Theodore Dru Alison Cockerell (1866–1948) see: J. Ewan and

- N. Ewan. 1981. *op. cit.* pp. 44–45. Also see: W. A. Weber. 1976. Theodore D. A. Cockerell. Colorado Assoc. Univ. Press. Most recent account of C. R. Orcutt (1864–1929) by Helen DuShane (Baja Calif. Travel Series, 23, Dawson's, Los Angeles, 1971) extends Jepson's account (Madroño 1:273–274, 1929). Lee W. Lenz (Marcus E. Jones. Rancho Santa Ana Botanic Garden, Claremont, CA. pp. 52–57, 1986) reviews the Orcutt-Parry-Pringle-Jones episode.
20. J. G. Lemmon was certainly the author of the anonymous "Catalogue of the plants and paintings of the Lemmon Herbarium" that appeared in Charles B. Turrill (Catalogue of the products of California exhibited by the Southern Pacific Company . . . Nov. 10, 1885–April 1, 1886. New Orleans, pp. 55–62, 1886). Jepson annotated this unpublished record (Fig. 2) as an "interesting photograph because it tells so much of what Lemmons were personally and botanically" and that it was communicated by Dr. Rimo Bacigalupi, ca. Sep 1932. For Lemmon references see Century, pp. 23–24, 54, Ewan, *op. cit.* (1981, p. 132) and F. S. Crosswhite (Desert Plants 1:12–21 and portraits, 1979).
  21. Jepson, W. L. 1946. Dict. Amer. Biog. 11:162; J. Ewan. 1944. Amer. Midl. Naturalist 32:513–518.
  22. Clinton Hart Merriam (1855–1942) was the "central figure in a dynamic era connecting the pioneer period of exploration with the present time of experimentation and interpretation" (Wilfred H. Osgood. 1945. Biogr. Mem. Natl. Acad. Sci. USA. 24:1–57, with bibliog. of his publs.). "Merriam, Vernon Bailey, and the cyclone trap fleshed out mammalogy as a science in America" (p. 9).
  23. Zoë 2:93–96. 1891; Century, pp. 36–37. Alice Eastwood presided over the California Botanical Club for more than sixty years from her first meeting of 26 Apr 1892 (Leaf. W. Bot. 7:59, 1953). A useful account of K. Brandegee is in: Notable Amer. Women 1:228–229, 1971.
  24. Daniel Cleveland (1838–1929) and associates are described in: Elizabeth C. MacPhail. 1976. Kate Sessions, pioneer horticulturist. San Diego Hort. Soc., San Diego. pp. 44 and 69; also see: Century, pp. 37 and 46.
  25. Sarah Paxen Moore Cooper (died 1908) married Ellwood Cooper (1829–1918) in August, 1853 (*teste* J. H. Barnhart). Cooper was a pioneer in eucalyptus cultivation in California. His friend Lorenzo Gordin Yates (1837–1909) who came to Santa Barbara in 1881, became president of the Santa Barbara Natural History society that was founded in 1876 (Charles L. Camp. 1963. J. Soc. Bibliogr. Nat. Hist. 4:178–193). Also see: Clifton F. Smith. 1976. Flora of the Santa Barbara Region, California. Santa Barbara Mus. Nat. Hist., Santa Barbara, pp. 42 and 59. He tells me (litt. 1972) that J. G. Lemmon and Henry Bolander visited the Cooper ranch near Goleta.
  26. Jepson portrayed K. Brandegee (Newman Hall Review 1:24, 1918). Type of "Viper parsnip" (*Leptotaenia anomala* Coult. & Rose) was taken by Katherine Curran near Carbondale, Amador Co., CA (W. L. Jepson, Flora Calif. 2:634, 1936). Other accounts: Century, p. 32–33; F. S. and C. D. Crosswhite (Desert Plants 7:128–139, 158–162, and portraits, 1985).
  27. Zoë 4:58–63 and pl. 26. 1893. Oliver Peebles Jenkins (1850–1935), physiologist and ichthyologist was noticed in: David Starr Jordan. 1922. Days of a man. New York. 1:399–400.
  28. Keck, D. D. 1948. Place of Willis Linn Jepson in California botany. Madroño 9:223–228.
  29. Parry, C. C. 1888. Rancho Chico. Overland Monthly ser. 2. 11:561–576. Photographs of "Sir Joseph Hooker Oak" on p. 565 and in: Rockwell D. Hunt. 1942. John Bidwell. Caldwell, Idaho. opp. p. 273. Parry is noticed on pp. 209, 211–212, 278–279.
  30. "Organization and early conservation activities of the [Sierra] Club" included W. Olney, Joseph LeConte, J. H. Senger, W. D. Armes, and C. B. Bradley, according to W. F. Badé (Life and Letters of John Muir, Boston, 2:256, 1924), but Jepson was not mentioned. Also, Holway R. Jones (John Muir and the Sierra Club, Sierra Club, San Francisco, pp. 7–9, 1965) did not mention Jepson. Jepson,

however, was present at the meeting of 28 May 1892, according to Linnie Marsh Wolfe (John of the mountains: the unpublished journals of John Muir, New York, p. 299, 1938; and Son of the Wilderness: the Life of John Muir, New York, pp. 254 and 360, 1947). Professor Senger taught German at Berkeley 1886–1913 and died in 1926. “Billy” Armes was evidently a popular professor, judging by comment of Loye Miller (Lifelong Boyhood. Berkeley, p. 58, 1950). Armes died in 1926.

31. William E. Colby (1875–1964) a lawyer and native of Benicia, California, joined the Sierra Club in 1898 and was active (president 1917–1919) to his death. Warren Olney (1870–1939), a lawyer and native of San Francisco, is quoted by Badé (*op. cit.* 2:376–377). Mrs. Edward T. Parsons, Muir’s friend, of that letter, was a charter member of the California Botanical Society.
32. Williams, E. F. 1899. New England Botanical Club. *Rhodora* 1:37–39.
33. Setchell, W. A. 1927. William Gilson Farlow. *Biogr. Mem. Natl. Acad. Sci. USA.* 21(4):1–22. portrait.
34. Setchell, W. A. 1907. *Univ. Calif. Publ. Bot.* 2:309–311. Note on A. A. Lawson (1870–1926) occurs in: Francis E. Vaughan. 1970. Andrew C. Lawson. Glendale, CA. pp. 38–39. Loren Edward Hunt, who contributed photographs to Jepson’s *Silva of California*, accompanied him on a field trip to Blue Lakes, Lake Co., 16 Jul 1897, when the type of *Godetia amoena* f. *huntiana* Jeps. was collected.
35. Jepson, W. L. 1938. *Viae felicitatis: the beginning years of the California Botanical Society.* *Madroño* 4:276–286. see p. 282.
36. William Frederic Badé (1871–1936), archeologist, professor, and acting president of the Pacific Theological Seminary, later Pacific School of Religion, Bancroft Way, Berkeley, and outdoorsman, “one of the most able and devoted preservationists” (James Mitchell Clarke. 1980. *Life and adventures of John Muir.* Sierra Club, San Francisco. pp. 304 and 320). Also see C. C. McCown in: *Dict. Amer. Biog. suppl.* 2, 1958. Cornelius Beach Bradley (1843–1936) was a missionary and professor of English, UC Berkeley (1882–1911).
37. Robert C. Miller (*Science* 108:220–221, 1948) lists members of the committee.
38. *Madroño* (1:12–18, 1916) includes a photograph of 14 identified participants taken at Mariposa Grove of Big Trees. Also see G. E. Nichols (*International Phytogeographic Excursion in America.* *Torreyia* 14:55–64, 1914); A. G. Tansley (*New Phytol.* 12:322–336, 1914; and 13:30–41. 83–92, 1914); the F. E. Clements records in *Univ. Wyoming archives*, Laramie; and a note by Paul B. Sears (*Plant Ecology.* *In* J. Ewan, *Short history of botany in the United States*, Hafner, New York, pp. 130–131, 1969).
39. During my four years with Jepson (see his *Flora Calif.* 2:10, 1936) I recorded conversations and events on half-sheets.

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## ANNOUNCEMENT

### JOINT ANNUAL MEETING OF AIBS, ASPT, BSA, AND ESA

9–13 August 1987, Ohio State University

Two symposia in botany will be presented this year: one on the Generic Concept, and one on the Reproductive Ecology of Aquatic Angiosperms.